AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A method of reducing foreign material concentrations in a reaction chamber having inner chamber walls, comprising the steps of:

a) etching a work piece in the reaction chamber, the work piece having one or more elements that form a first layer of reaction products during said etch step that partially adhere to said inner chamber walls; and,

b) introducing a species into said reaction chamber during or after said etching step (a) that increases the adhesion of said first layer of reaction products to said inner chamber walls.

2. (Original) The method of claim 1, wherein in said introducing step (b) a second layer is formed on said first layer.

3. (Original) The method of claim 1, wherein said reaction chamber comprises a vacuum chamber.

4. (Original) The method of claim 3, wherein said vacuum chamber comprises a sputter etch chamber.

5. (Original) The method of claim 1, wherein said inner chamber walls comprise quartz.

6. (Original) The method of claim 1, wherein said work piece comprises a semiconductor, glass, ceramic or aluminum oxide.

7. (Original) The method of claim 1, wherein said work piece comprises a carbon-

containing layer.

8. (Original) The method of claim 7, wherein said carbon-containing layer comprises a low-K dielectric, polyimide, or photoresist.

9. (Original) The method of claim 1, wherein in said introducing step (b) said species comprise silicon and oxygen.

10. (Original) The method of claim 1, wherein in said introducing step (b) said species are provided by a component of said etch chamber.

11. (Original) The method of claim 10, wherein said component comprises a ring surrounding said work piece.

12. (Original) The method of claim 11, wherein said ring comprises quartz or alumina.

13. (Original) The method of claim 10, wherein said etching step (a) and said introducing step (b) occur simultaneously to provide said species for increasing the adhesion of said first layer of reaction products while said first layer is forming on said inner chamber walls.

14. (Previously Presented) The method of claim 1, wherein said introducing step (b) comprises the steps of:

(i) removing said work piece from said reaction chamber;

(ii) providing a substrate in said reaction chamber; and

(iii) etching said substrate to produce said species.

15. (Original) The method of claim 14, wherein said substrate comprises a layer of silicon oxide.

16. (Original) The method of claim 14, wherein said substrate comprises a layer of alumina.

17. (Original) The method of claim 14, wherein in said etching step (iii) said species comprise silicon and oxygen.

18. (Original) A method of reducing foreign material concentrations in a sputter etch chamber having inner chamber walls, the method comprising the steps of:

a) providing a first substrate having a low-K dielectric layer to the sputter etch chamber;

b) etching a portion of the low-K dielectric layer, wherein a first layer comprising carbon partially adheres to said inner chamber walls;

c) removing the first substrate from the sputter etch chamber;

d) providing a second substrate comprising an oxide layer to the sputter etch chamber; and

e) etching the oxide layer, wherein a second layer comprising oxygen forms on the first layer, the second layer increases the adhesion of the first layer to the inner chamber walls.

19. (Original) The method of claim 18, wherein the chamber walls comprise quartz.

20. (Original) The method of claim 18, wherein the oxide layer comprises silicon oxide.

21. (Original) A method of reducing foreign material concentrations in a sputter etch chamber having inner chamber walls and an oxide component, the method comprising the steps of:

a) providing a substrate having a low-K dielectric layer to the sputter etch chamber; and

b) etching a portion of the low-K dielectric layer and the oxide component, wherein etching of the low-K dielectric layer forms a carbon-containing reaction product that partially adheres to said inner chamber walls and etching of the oxide component simultaneously provides an oxygen-containing reaction product for increasing the adhesion of said carbon-containing reaction product to the inner chamber walls.

22. (Original) The method of claim 21, wherein said oxide component comprises a ring surrounding the substrate.

23. (Original) The method of claim 22, wherein the ring comprises a material selected from the group consisting of quartz and alumina.

24. (Original) The method of claim 22, wherein the inner chamber walls comprise quartz.